



Serving "Our Army at War -- Relevant and Ready"



OIF/OEF Lessons Learned

Program Executive Office

for

Combat Support & Combat Service Support

Presented to:

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Innovation for Today and Tomorrow's Expeditionary Forces

Overview – Lessons Learned

- ◆ Accelerated timelines for requirements (ONS) forces new ways of doing business in acquisition and testing.
- ◆ Threat driving adaptive Tactics, Techniques and Procedures forces equipment to be used outside performance envelopes.
- ◆ Installation of material solutions cannot burden in-theater organic maintenance resources.
- ◆ Early identification of “Stay Behind Equipment” and in-theater reset activities are key to stabilized readiness rates.
- ◆ Recognition of need to train soldiers on unfamiliar equipment at the start of each rotation is critical.

OIF/OEF Lessons Learned

Problems/Issues

Solutions



Overall protection issues

- Soft skin Wheeled Vehicles are now placed in a tactical environment with threats from large range of ballistics
- Current M1114's (up-armored HMMWV's) were now being faced with new improvised explosive devices which they were not designed to defeat

Overlay Door Kit: Small arms/ Improvised Explosive Device (IED) protection

- Tested at Aberdeen Test Center
- Rapid development and installation of Add-on Armor kits for wide range of tactical wheeled vehicles in theater to provide protection for crew
- Currently being installed on all new production M1114s as well as retrofitted on those previously fielded without kit



Photo: Alan Lessig Military Times

Gunner position unprotected

- ### Gunner's Protection Kit (GPK): Design and development of kit, successfully tested, currently being produced



Crew unprotected against small arms and Improvised Explosive Devices (MTV)

MTV Add on Armor: Meets NATO Level I threat protection

- Machine gun mount/ring incorporated into the kit to provide crew protection
- Currently being installed in Iraq



OIF/OEF Lessons Learned

Problems/Issues



- ◆ Unit fabricated armor not approved
 - Some approaches potentially increase crew vulnerability



- ◆ Additional weight of "home grown" armor approaches exceeds vehicle design
 - Increased maintenance/catastrophic failure of running gear, ball joints, shocks, overheating, etc.



130 degrees F in shade-0900

- ◆ Excess heat especially inside Armored Tactical Vehicles

Solutions

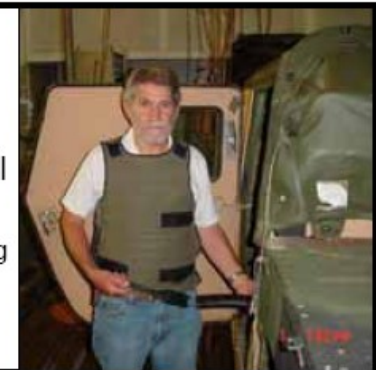
- ◆ DA approved and tested Add on Armor developed and installed on light, medium and heavy vehicles



- ◆ Integrated Ballistic Cab



- ◆ Ten (10) air and liquid cooled vests currently sent to theater for feedback from units
- ◆ Air conditioning being installed on all Armored Tactical Vehicles
 - Over 100 contractors currently installing AC on HMMWVs at 10 sites and in Balad currently installing AC on MTVs and HTVs



OIF/OEF Lessons Learned

Problems/Issues

Solutions



- ♦ Redistribution of M1114s not in Fully Mission Capable condition

- ♦ 64 PM funded S&S and AM General contractors currently in theater to fix M1114s



- ♦ Engine failures (M915) due primarily to sand ingestion

- ♦ Air Cleaner Kit: Analysis shows air cleaner system improvements will increase the air cleaner capability approximately 4-fold, reducing potential for failure due to sand ingestion



Photo: Getty Images Scott Nelson

- ♦ Soldiers not wearing seatbelts due to total pack and need for freedom of movement

- ♦ PM TV currently developing three options for new design of seats to include easy to remove seat restraints across all weight classes



OIF/OEF Lessons Learned

Problems/Issues

Solutions



- ◆ Service intervals increase during wartime

- ◆ PM TV currently seeking methods of dealing with this issue by shortened procedures



- ◆ Op Tempo very high. One year of peace time miles in less than one month in theater

- ◆ PM TV is currently delivering solutions that increase reliability and availability of systems through the RESET program.

- ◆ Vehicles are RESET to Zero Miles / Zero Hours in 160 days or less.

RESET RRAD



Stockpile of worn tires



- ◆ Heavy trailer tire configuration gets stuck in soft soil (M1000)

- ◆ Sand Mobility Enhancement Kit (SMEK): PM TV sent 3 kits* (21 tires ea.) to theater for use in sand environment.

- Results indicate increased mobility and mileage (10,000) without blowout

* 3 Kits funded in-house; Additional kits are unfunded



Standard tires (l) vs. SMEK (r)

